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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,448	10/20/2003	C. David Young	03CR081/KE	3388

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ROCKWELL COLLINS, INC.
INTELLECTUAL PROPERTY DEPARTMENT
400 COLLINS ROAD NE
M/S 124-323
CEDAR RAPIDS, IA 52498

EXAMINER

RUSSELL, WANDA Z

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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08/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/689,448

Applicant(s)

YOUNG ET AL.

Examiner

Wanda Z. Russell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) ✓
Paper No(s)/Mail Date 10/21/2003
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The terminology "ODMA" applicant uses is not spelled out and explained in the specification. For examination on the merits, it will be interpreted as the best understood. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-18** are rejected under 35 U.S.C. 102(b) as being anticipated over Young et al. (U.S. Patent 6,317,436 B1).

For **claim 1**, Young et al. substantially teach a method (Title) of communicating over a network of nodes (Abstract, line 2) using a plurality of broadcast channels (Abstract, line 3), each channel configured to facilitate the transmission and reception of data (Abstract, lines 5-8) during cycles of time (Abstract, line 3), the method comprising:

dividing (include, col. 2, line 57) each cycle of time into discrete time frames (col. 2, line 57);

dividing each frame into a plurality of slots (col. 2, lines 57-58);

designing one of the plurality of broadcast channels as a common bootstrap channel (bootstrap slot –Fig. 5. A bootstrap slot can be interpreted as bootstrap channel in a broad interpretation);

each node in the network configured to broadcast (col. 2, lines 53-54), to other nodes within one hop of said node (Fig. 1), on the common bootstrap channel (bootstrap slot –Fig. 5. A bootstrap slot can be interpreted as bootstrap channel in a broad interpretation) during a first bootstrap slot, slot assignment information relating to any broadcast channel (Fig. 5);

assigning (col. 7, lines 30-34. Slot can be interpreted as channel in a broad interpretation) each node to communicate over a broadcast channel that is one of the plurality of broadcast channels (Fig. 5);

each node broadcasting (Fig. 1, and col. 1, lines 24-25), on its assigned channel (Fig. 5) during a second dynamically assigned bootstrap slot (Fig. 5), slot assignment information relating to the assigned broadcast channel to other nodes within one hop of said node and on said assigned channel (Fig. 1 and 5); and

each node communicating according to the slot assignment information (Fig. 1 and 5, and col. 7, lines 30-34).

For **claim 2**, Young et al. teach the method of claim 1, wherein slot assignment information for communication between nodes assigned to a broadcast channel changes in time during successive frames (col. 8, line 57, and lines 46-60).

For **claim 3**, Young et al. teach the method of claim 1, wherein slot assignment information for communication between nodes assigned to different channels is fixed in time during successive frames (col. 7, line 58).

For **claim 4**, Young et al. teach the method of claim 1, wherein the slot assignment information includes USAP protocols (col. 3, line 58).

For **claim 5**, Young et al. teach the method of claim 1, further including:
yielding (col. 13, line 7) a slot assignment of a first node to a second node if the first node does not have information to communicate, wherein the first and second nodes are within one hop of each other, and further wherein the second node communicates information during the slot assignment (col. 13, lines 5-12).

For **claim 6**, Young et al. teach the method of claim 5, further including:
loaning (allow, col. 12, line 46) a slot assignment of a first node to a second node if the second node does not have information to communicate, wherein the second node returns the slot assignment to the first node when the second node no longer needs to use the slot assignment (col. 12, line 38 to col. 13, line 12).

For **claim 7**, Young et al. teach the method of claim 6, further including:
one of loaning and yielding a slot assignment to a node that has insufficient time (under heavy loads, col. 12, line 42) to reserve a slot assignment for communications (col. 12, line 38 to col. 13, line 12).

For **claim 8**, Young et al. teach the method of claim 1, further comprising:
identifying a node in the network having significantly more nodes within one hop of said node than substantially all of the other nodes in the network; and

selectively withholding information about the nodes within one hop of said identified node from the other nodes in the network during the first and second bootstrap slot allocations, thereby preventing the identified node from substantially limiting spatial reuse of slot assignments (Fig. 3, and col. 4, line 21 & lines 19-27).

For **claim 9**, Young et al. teach the method of claim 1, further including: determining whether any slots within the frame are unassigned; and allowing any of the nodes to contend for use of the unassigned slots (col. 8, line 15).

For **claims 10 and 11**, they are corresponding to claim 1 for specific wireless (Abstract, line 6) application, therefore they are rejected for the same reason above.

For **claims 12-17**, they are dependent to claim 10 and corresponding to claims 2-7, therefore they are rejected for the same reason above.

For **claim 18**, Young et al. teach a wireless communication network, comprising:
a plurality of TDMA communications channels (Fig. 5), wherein one of the channels is a common channel (Slot can be interpreted as channel in a broad interpretation);

a plurality of nodes (Fig. 1), each node being assigned to one of the channels (col. 7, lines 30-34. Slot can be interpreted as channel in a broad interpretation);

a repeating time cycle divided into a plurality of frames (col. 2, line 57);

a first plurality of bootstrap slots (Fig. 5) for communicating on the common channel, wherein all of the plurality of nodes receive slot allocation information therefrom;

a second plurality of bootstrap slots (Fig. 6, and F=set of channels, col. 5, line

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19), distributed across all the channels, wherein each node receives slot allocation information from other nodes that are within one hop of said node and on the same assigned channel (Fig. 1 & 6).

Citation of Pertinent Art

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Frezza et al. (U.S. patent 4,982,430) teach a bootstrap channel.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda Z. Russell whose telephone number is (571) 270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZR

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Seema S. Rao
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